



# Goodwill Industries Electric Delivery Vehicle Project

The Bay Area Air Quality Management District partnered with Goodwill Industries of San Francisco, San Mateo, and Marin (SFGoodwill) to showcase the viability of heavy-duty electric trucks – the first of its kind being demonstrated in the U.S. by deploying 10 battery-electric delivery trucks, one battery-electric debris hauler, and supporting electric charging infrastructure for the 11 vehicles. The vehicles were manufactured by BYD Motors at its facility in Lancaster, CA. The Center for Transportation and the Environment developed the deployment strategy, considering expected vehicle operation times, charging schedules and times, and the expected electrical costs.



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The objectives include demonstrating benefits and costs, advancing commercialization of zero-emission technology in the delivery truck sector, and providing a roadmap and best practices for other fleets considering electric vehicle technologies. Accelerating zero-emission delivery truck deployments will be critical to achieving the state's goals of reducing greenhouse gas emissions from on-road trucks with the co-benefit of reducing criteria pollutant emissions.

**Dates:** 02/15/2017 – Spring 2020  
**Grantee:** Bay Area Air Quality Management District,  
**Partners:** SFGoodwill, BYD Motors, Center for Transportation and the Environment

**Grant Amount:**  
CARB Contribution: \$2,738,557  
Matching Funds: \$1,697,362  
Project Total: \$4,435,919



## Vehicles/Equipment Funded

- ten BYD T7 electric delivery trucks (Class 6)
- one BYD T9M roll-on/roll-off debris hauler (Class 8)
- ten 40 kW AC electric vehicle chargers
- one 80 kW AC electric vehicle charger

## Lessons Learned

- Deploying new clean technologies require flexibility and financial reserves to cover unanticipated expenses.
- Strong project management and partnerships are required for success, especially when presented with numerous challenges.
- Piloting 1-2 vehicles in service well ahead of building the remaining fleet could help detect and resolve issues early.

## Status Updates

- All chargers have been installed with time-clock functionality to limit the amount of simultaneous charging.
- All vehicles have been built and delivered.
- All vehicles have been tested during normal business operations. Issues have been identified and are currently being addressed.

